Protecting Mobile Agent using Enhanced Reference Monitor based Security Framework

Abstract

The introduction of mobile agent technology to distributed systems presents lots of benefits which include reduced network bandwidth consumption and network latencies, load balancing, etc. One critical issue with mobile agent technology is the security of its data and code against malicious hosts. The different security mechanisms proposed to offer protection seems to suffer some shortcomings that impact the performance of mobile agent’s execution. This paper presents an efficient security framework for the protection of mobile agents.

Our proposed enhanced security framework deploys a trusted third party technique designed to allow the offloading of the computation-intensive verification mechanism for execution.

This approach ensures that resource consumption by the verification mechanism of the reference monitor agent on the hosts is largely reduced, thus performing more efficiently than the existing system.
References


Index Terms

Computer Science Security
Keywords

Security, Mobile Agent, Reference Monitor, Trusted Third Party